

REMARKS

This is in response to the Official Action currently outstanding with regard to the present application, which Official Action the Examiner has designated as being Final.

Applicants wish to thank the Examiner for the courtesy accorded to their undersigned representative during a telephone interview regarding this application on September 20, 2005. During that interview, Applicants' view of the differences between the present invention and the cited Miyashita reference was discussed along with potential revised wording for some of the claims proposed by Applicants for discussion. However, no agreement was reached during this interview.

Claims 1-10 were canceled, without prejudice and Claims 11 – 28 were added previously. Hence, Claims 11-28 were pending at the time of the issuance of the currently outstanding Final Official Action. By the foregoing Amendment, Applicants propose that Claims 17 and 23 be amended as set forth hereinabove. Applicants do not propose the cancellation, addition or withdrawal of any claims. Accordingly, in the event that the Examiner grants entry to the foregoing amendment, Claims 11-28 as hereinabove amended will constitute the Claims under active prosecution in this application.

The claims as they will appear in the event that the Examiner grants entry to the foregoing Amendment are set forth hereinabove showing the changes proposed to be made and appropriate status identifiers as required by the Rules.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Re-acknowledged Applicants' claim for foreign priority under 35 USC §119 (a)-(d) or (f), and reconfirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;

2. Confirmed his previous indication that the drawings as filed with this application on 14 December 2001 are acceptable;
3. Rejected Claim 11-12, 14, 16-18, 20, 22-24, 26 and 28 under 35 USC §102(e) as being anticipated by Miyashita et al. (US Patent 6,735,160 B1); and
4. Rejected Claims 13, 15, 19, 21, 25 and 27 under 35 USC §103(a) as being unpatentable over the Miyashita et al reference in view of Ueki (US 6,678,236 B1).

No further comment regarding items 1-2 above is deemed to be required in these Remarks.

With respect to items 3 and 4, Applicants now are proposing that independent Claims 17 and 23 be amended so as to clearly and definitely indicate that, as is the case with respect to Claim 11, the digital watermarking is **embedded in the main information such that copying of the main information also copies the digital watermarking.** Further, Applicants propose an amendment to Claims 17 and 23 that clearly and definitely indicates that **the additional information cannot be copied.** The importance of these amendments that simply clarify the present claim wording and should not require significant further consideration and/or search by the Examiner will become apparent below.

In the currently outstanding Official Action, the Examiner has indicated a belief that it is the Applicants' position that the prior art does not teach or suggest (i) the embedding of copyright information in the main information, (ii) the presence of so-called "watermarking" of any type, (iii) the embedding of watermarking in the main information, or (iv) that each pit is to have a depth formed according to the additional information. On these bases, the Examiner has maintained his rejection of this application and made that rejection Final. Applicant respectfully submits that the Examiner's comments concerning Applicants' position present a clear indication that he has incorrectly understood Applicants' previous arguments, and in so doing has failed to correctly apply the true teachings of the Miyashita reference against the claims of this application.

As previously stated in this prosecution, it is Applicant's position that an inventive aspect of the present invention lies in the use of two types of information (i.e., "digital watermark information" and "additional information" as those types of information are defined in the present specification) stored in two different ways on an optical recording medium with respect to main information stored thereon. Hence, it will be recalled that Applicants have stressed that the characteristics of these two types of information and their storage on an optical storage medium are such that the "digital watermark information" (that may constitute "copyright information") must be copied with the "main information", and that the "additional information" cannot be copied with the "main information". Therefore, it will be seen that Applicants previously have clearly and definitely indicated that in the present invention the "digital watermark information" that must be copied with the "main information" may be indicative of "copyright information" concerning the copyright status of the "main information". Further, Applicants also have stressed that the presence/absence of "additional information" that cannot be copied on a particular optical recording medium indicates whether or not that optical recording medium is original (i.e., authorized) or a copy (i.e., unauthorized).

Still further, contrary to the positions taken by the Examiner in commenting upon Applicants' previous argument in support of the maintenance of his previous rejections, Applicants have made it abundantly and specifically clear throughout this prosecution that the prior art Miyashita reference does disclose so-called "watermark information", that that so-called "watermark information" may be "copyright information" and that the "watermark information" disclosed by the Miyashita reference may be embedded in the "main information stored on the optical recording medium in the form of a modulation (i.e., jitter) superimposed upon the main information in such a manner that it cannot be copied with the main information". In other words, the nature of the "embedding" of information in the main information is different as between the present invention and the Miyashita reference. Accordingly, Applicants respectfully submit that the Examiner has not correctly understood their position in this prosecution, and further that as a result he has misunderstood the import of the teachings of the cited Miyashita reference as they apply to the invention herein claimed.

Hence, as previously indicated, it is to be understood that the present invention allows the shortcomings of the background art discussed in the present specification (i.e., (i) copyright protection using a content scrambling system can be defeated by breaking the encryption code thereby allowing pirated copies to be easily made; (ii) placing restrictions upon the reproduction of an optical disk from which information based on tangential push/pull signals cannot be detected is overly restrictive in that it prevents copying of copyright-free information and does not prevent unauthorized copying of data created by encoding images from a screen display; and (3) digital watermarking of copyrighted information in and of itself either does not prohibit unauthorized copying or the absence thereof may be a factor that prevents the copying of information that is not subject to copyright) to be overcome. Specifically, the two types of information provided by the present invention in addition to the “main information (namely, the “digital watermarking information” and the “additional information”) and the manner of their storage on an optical recording medium provide a synergistic advantage that allows unauthorized disks to be determined (as shown for example in Table 1 and related discussion at pages 25-26 of the present specification).

On the other hand, the information to be recorded in an optical disk of the Miyashita reference consists of (i) “main information” that can be duplicated, and (ii) “secondary information” (Miyashita’s “digital watermarking”) that cannot be duplicated. Note that this is the case “even if information on the optical disk is copied to another optical disk according to the presence or absence of the pits” (see Miyashita at Column 2, lines 32-35). Further, there is no teaching, disclosure or suggestion in Miyashita concerning information other than the main information that must be duplicated along with the main information each time the main information is copied. Therefore, the Miyashita reference fails to teach, disclose or suggest the synergistic effect that results in the present invention from the use of both “additional information” (equivalent to Miyashita’s “secondary information” that may consist of so-called “digital watermarking” information) that cannot be copied with the main information and information other than the main information (in the language of the present application “digital watermarking information”) embedded in the main information in such a manner as to require its duplication with the main information each time the main information is copied.

Applicants respectfully submit that once one overcomes the confusing use of the same or similar terminology in the present invention and the Miyashita reference (i.e., “embedding”, “main information”, “digital watermarking”, “additional information”, “secondary information”) often to mean different things and concentrates instead on the relationships between/among the different types of information taught in the reference on the one hand, and by the present application on the other hand, the significant distinctions between the present invention and the references relied upon by the Examiner become clear.

For example, with specific regard Claim 11 of the present application, it will be seen that that claim is directed to digital watermarking indicative of copyright information being embedded in the main information *in such a way that copying of the main information necessarily includes the coping of the digital watermarking* (see particularized definition of “digital watermarking” at page 14, line 19 to page 15, line 10 of the present specification). Contrary to the Examiner’s arguments, Applicant respectfully submits that this feature is not taught, disclosed or suggested by either the Miyashita reference or the Ueki references. In particular, the Miyashita reference does not disclose the “embedding” of copyright information (“digital watermarking”) in the main information as disclosed in the present specification. *This is because the Miyashita reference does not teach, disclose or suggest the provision of digital watermarking representative of copyright information being “embedded” in the main information such that that digital watermarking is necessarily copied with the main information. Instead, the Miyashita reference discloses the storage of “digital watermarking” (i.e., copyright information) associated with the main information in the so-called “jitter” introduced into the recording medium by the physical placement of the main information carrying portions on the recording medium (see, for example, Miyashita et al at Column 2, lines 21-38 or at Column 7, lines 22-37).*

Therefore, while it is true that the Miyashita reference unfortunately refers to “embedding” “hidden information” (i.e., “secondary information”) such as “digital watermarks” into the primary (main) digital information, it must be understood that the remainder of the Miyashita reference makes is abundantly clear that what is really disclosed is storing the “hidden information” as “secondary information” in the so-called “jitters”(i.e., modulations superimposed upon the main information that are not copied with the main information), not in the main information in the sense that the “embedded” information necessarily will be copied with the main information each time the main information is copied (see Miyashita Column 2, lines 29-35, and Column 7, lines 23-37) Thus, as stated at Column 5, lines 12-15 of Miyashita: “This realizes an optical disk reproducing apparatus having a function of protecting copyrights by reading the secondary digital information that is embedded with the jitter modulation and the radial modulation.” (Emphasis added)

Accordingly, while the Miyashita reference states that an unauthorized copy can be distinguished from an original by whether or not the “additional information” (i.e., “digital watermarking information” permissibly including “copyright information”) is present in the so-called “jitters”, that “secondary” (or “additional” in the language of the present application) information is not detected in the normal course of the playback of an unauthorized copy of a recording disk (-R, _RW, etc.). Thus, there is no alert or other mechanism present in copied “main information” in the Miyashita context to prevent further copies being made of an unauthorized copy as there is in the present invention.

Referring now specifically to the claims of the present application, it will be seen that presently pending Claim 11 specifically recites the limitation that “main information” has “digital watermarking” embedded therein such that copying of the main information also necessarily copies the “digital watermarking” embedded therein, the digital watermarking indicating “copyright information”.

The currently outstanding Official Action contends that the “digital watermarking” claimed by this application is taught by the Miyashita reference at Column 7, lines 22-33; Column 5, lines 12-15 and Column 11, lines 41-52. Applicants respectfully submit, however, that it clearly should be recognized that the portions of the Miyashita reference cited in support of this position by the Examiner describe the so-called “secondary digital information” which is hidden in (“embedded in”) the main digital information by phase modulation. Further, Column 7, line 28 of the Miyashita reference indicates that “watermarking” as that term is used in that patent is an example of this “secondary information”.

Accordingly, Applicant respectfully submits that the use of the term “digital watermarking” in the Miyashita reference cannot be read as corresponding with, or being equivalent to, the use of the term “digital watermarking” in the present application. Specifically, it is Applicant’s position that the “digital watermarking” contemplated by the Miyashita reference is not (and cannot be) copied with the main information (see Miyashita at Column 10, lines 53-64). However, the “digital watermarking” as contemplated in the present invention must be copied with the main information. In support of this position, Applicant notes that the foregoing interpretation must be correct because if the “digital watermarking” (i.e., “secondary information”) of the Miyashita reference were to be copied with the main information, it would not be possible to distinguish a copy from an original, and the Miyashita reference would fail to function as intended as described at Column 10, lines 45-64 thereof as follows:

“As described above, the secret key is recorded by performing the jitter modulation with which the position of each edge (two edges in the track direction) of each recording mark is displaced by a small amount in the track direction (in the direction of scanning beam spots). Therefore, an ordinary reproducing apparatus that does not have a function of reading information that is hidden within the jitter cannot read the secret key.

“Consequently, even if the entire content of a DVD on which a secret key has been recorded in the manner as described above is read by an ordinary reproducing apparatus and is recorded onto another DVD, only the primary digital information is copied and the secondary digital information (secret key) hidden within the jitter is not copied. This makes it possible to distinguish original DVD’s from DVD’s that are replicated without proper authorization. As a result, copyright infringements by pirated DVD’s can be avoided, for instance, by providing reproducing apparatus with a function of allowing the reproduction of only DVD’s that include secret keys.

In addition, it is to be noted that the outstanding Official Action appears to equate the presently claimed “additional information” with the “secondary information” discussed by the Miyashita reference in that neither of these kinds of information is contemplated to be copied with the “main information”. Applicant agrees.

More specifically, apparently due to the confusion arising from the use of the same or similar terminology by the Miyashita reference and the present application, the currently outstanding Official Action suggests with respect to Claim 16 that the “secondary digital information” of the Miyashita reference (i.e., the “digital watermarking” disclosed in that reference) cannot be copied. Applicants respectfully note, therefore, that that rejection of Claim 16 is inconsistent with the rejection of Claim 11 wherein the alleged anticipation rejection necessarily means that the Examiner is urging that the “secondary digital information” of the Miyashita reference must be copied with the “main information. Applicants respectfully submit that the Examiner cannot have it both ways and the inconsistency in his rejections suggests that the finality of the present Official Action is inappropriate at this stage of this prosecution.

Still further, Claim 17 recites reproduction restricting means that determine whether or not the “main information” can be reproduced based upon determinations of whether or not (i) “digital watermarking” is embedded in the “main information” as discussed above with respect to Claim 11, and (ii) “additional information” indicating that the recording medium is original is formed in the optical recording medium to be copied. However, the Miyashita reference does not teach both “digital watermarking” and “additional information” as those terms are used in the present application. Also, the Miyashita reference nowhere teaches, discloses or suggests that reproduction is to be restricted if “digital watermarking” is present and “additional information” is not present.

In the latter regard again, the currently outstanding Official Action appears to suggest that the “secondary information” discussed by Miyashita corresponds to both the “digital watermarking” and the “additional information” of the present invention on the basis that the “secondary information” of Miyashita can be “digital watermarking” or something else such as audio information. Applicant respectfully submits that such a conclusion is illogical. Regardless of the form taken by the Miyashita “secondary digital information”, that “secondary digital information” cannot be both the “digital watermarking” contained in the “main information” as discussed above regarding Claim 11 and at the same time be the “digital watermarking” described by the Miyashita reference as “secondary information”.

In addition, Claim 12 recites each pit has a depth formed according to the additional information. The outstanding Official Action suggests that the Miyashita reference anticipates Claim 12. Applicant respectfully notes, however, that the Miyashita reference does not teach, disclose or suggest that the depth of the pits is determined according to the content of the “secondary information”. The Miyashita reference teaches that leading and trailing edges of pits may be displaced so as to change the phase represented by those edges. Miyashita, however, is silent regarding the depth of the pits, and therefore, does not teach, disclose or suggest that the depth of the pits is formed according to his “secondary information” as would be required to support the outstanding anticipation rejection.

Applicant further respectfully submits that the Ueki reference does not make up for the deficiencies of the Miyashita reference. As is clear from the Ueki reference at Column 16, lines 33-60, that reference teaches the necessity of an appropriate CSS key stored in a pre-pit area corresponding to a given value in order to playback the information stored on the disk. Thus, the CSS key can be utilized for copyright protection. However, as described in the background section of the present specification, since this CSS key is scrambled during illegal copying, no unauthorized copying can occur even if the “main” information is not copyrighted.

Applicant also respectfully submits that Claim 23, which includes limitations directed to the situation restricting the reproduction of the main information if it is determined that additional information is not formed on the optical recording medium and it is determined that digital watermarking is embedded in the main information, is patentable over the art currently of record for the same reasons as have been discussed in detail above. Specifically, in the Miyashita reference no watermarking is “embedded” in the main information in the manner contemplated by the present invention. Therefore, both conditions of this claim are not taught, disclosed or suggested by the Miyashita reference. Also, whether or not copying is allowed in the context of the Ueki reference depends upon the presence of a non-corrupted CSS key, not upon either of the conditions currently set forth in Claim 23. Hence, Applicant respectfully submits that Claim 23 is patentable over the cited references as well.

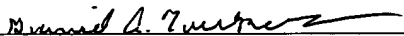
Finally, Applicant notes that with the exception of the above comments concerning Claims 12, 18 and 24, it relies upon the patentability of the independent claims as submitted herewith in support of the patentability of the claims directly or indirectly dependent thereon.

For each and all of the foregoing reasons, Applicant respectfully submits that the cited references are insufficient to support the Examiner’s rejections as they apply to the claims as amended above. Further, Applicant respectfully submits that neither reference relied upon by the Examiner discloses, teaches or suggests whether taken alone or in combination with the other the invention as now claimed. Accordingly, entry of the foregoing Amendment as placing this application in condition for allowance or at least better form for Appeal pursuant to 37 CFR 1.116, reconsideration, withdrawal of the currently outstanding rejections and allowance of this application with Claims 11-28 as hereinabove presented all are respectfully requested in response to this communication.

Applicant also believes that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: October 3, 2005



SIGNATURE OF PRACTITIONER

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